SHEYKIN, A.Ye., prof., doktor tekhn. nauk

Special cements for hydraulic engineering concrete. Trudy MITT no.191:85-109 '64.

Strength of cement stone during prolonged heating at a temperature of 155°C. Ibid.:110-118

Charge of particles of cement in aqueous suspensions. Ibid.: 152-153 (MIRA 18:6)

SHEYKIN, A.Ye., doktor tekhn. nauk, prof.; YAKUB, T.Yu., inzh.

Physicochemical nature of the expansion of nonshrinking and expanding cements during hardening. Trudy MIIT no.191:5-62 '64. (MIRA 18:6)

SHEYKIN, A.Ye., prof., doktor tekhn. nauk; OLEYNIKOVA, N.I., kand. tekhn. nauk

Effect of warm moist processing and the fineness of the grinding of the cement on the structure and characteristics of the cement stone. Trudy MIIT no.191:63-84 '64. (MIRA 18:6)

SHEYKIN, A.Ye., doktor tekhn. nauk, prof.

[Outline of lectures on individual parts of the course "New materials in industry"] Konspekt lektsii po otdel'nym razdelam kursa "Novye materialy v tekhnike." Moskva, Mosk. in-t inzhenerov zhel-dor. transp., 1963. 90 p. (MIRA 18:5)

SHEYKIN, G.Yu., kand.tekhn.nauk; SUKHORUCHKIN, I.A., kand.tekhn.nauk
GORBUNOVA, Ye.N., mladshiy nauchnyy sotrudnik; SURIN, V.A.,
mladshiy nauchnyy sotrudnik

Automatoc distribution of water by closed stationary conduits.
Gidr.i mel. 12 no.7:1-12 Jl '60. (MIRA 13:7)
(Irrigation canals and flumes)

SHEYKIN, I., elektroslesar'.

Let's follow the best examples. Mast.ugl. 4 no.11:12 N '55.
(Electricity in mining)(Coal mines and mining) (MLRA 9:2)

SHEYKIN, I.V.; DERYUGIN, B.A.

Determination of heat saturation during the summer period for the calculation of deptas of thawing. Trudy Gos.inst. po proek. mor. por. i sudorem. pred. no.6:29-34 '59. (MIRA 14:3)
(Frozen ground)
(Thawing)

SHEYKIN, I. M. (Dotsent), AL'TMARK, A. M., VORONINA, E. A., and ROZENBLIT, Ya. A.

Analiz Effektivnosti Aktivnykh Metodov Lecheniya Zatyazhnykh Form Shizofrenii

p. 368 V sb Aktual'nyy Problemy Nevropatologii i Psikhiatrii. Kuybyshev, 1957

Iz Gor'kovskoy Psikhonevrologicheskoy Bol'nitsy

SHEYKIN, I.V.

Estimating the probable degree hour sums of air in calculating the seasonal thawing depth of ground. Mat. k osn. uch. o merz. zon. zem. kory no.7:150-156 '61. (MIRA 14:7)
(Frozen ground)

SHEYKIN, I.V.

Conference on heat measurements in cryology. Pochvovedenie no.12:117-118 D '61. (MIRA 16:8)
(Frozen ground) (Temperature--Measurement)

ACC NR: AT6028813 (N) SOURCE CODE: UR/3222/65/000/008/0129/0134

AUTHOR: Sheykin, I. V. (Engineer); Zaytseva, O. B. (Engineer)

ORG: none

TITLE: Automatic program-controlled wave recorder

SOURCE: Moscow. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut morskogo transporta. Trudy, no. 8(14), 1965. Volnovyye issledovaniya; inzhenernyye izyskaniya (Wave studies; engineering research), 129-134

TOPIC TAGS: measuring instrument, liquid level instrument, hydraulic engineering, ocean dynamics, automatic wave recorder, ocean wave height, OCEANOGRAPHIC INSTRUMENT

ABSTRACT: The article describes an automatic program-controlled wave recorder used in conjunction with an electric-contact wave staff. The wave recorder system described below was designed and tested by the Laboratory for Instruments and Methods for Studying Hydraulic-Engineering Structures of the State Planning, Design and Scientific Research Institute for Marine Transportation of the Ministry of the Merchant Marine. The recorder and power supply are sealed in a 600 x 460 x 440-mm steel box, which is placed on the bottom near the base of the staff and connected to it by a 5-strand RShM cable. The recorder is activated only when the waves reach or exceed a preset height determined by movable contacts on the staff. The recorder is equipped with an expended-tape indicator mounted above water on the wave staff. The operating principles and components are discussed in detail, and a

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ACC NR: AT6028813

circuit diagram of the recorder system is given. When a wave actuates the triggering contact, the recorder switches on for 10 min and then shuts off for 2 hr. If, after 2 hr, no waves of the necessary height are detected, the recorder switches on for 5 sec and makes a special mark on the photosensitive oscillograph tape. The unit is powered by a 29-GRMTs-13, 14.5-v, dry-cell battery. The recorder housing is made of opaque, 6-mm-thick textolite plate. The wave staff used in the tests was a poly(vinyl chloride) tube with 2-cm-wide copper rings spaced 10-cm apart. In the tests, it was found that water film on the staff in the wave trough resulted in a thick trace on the tape. To overcome this, the use of an improved type of contact is recommended. The improved contact consists basically of 2 vertically positioned brass cylinders, one within the other and insulated from each other at the top. Two sets of holes at different heights in the outer cylinder allow water to enter (through the lower holes) the space between the cylinders and thus close the circuit. Most of the air in the cavity between the cylinders is forced out of the upper holes; however, some air is trapped above the upper holes thus preventing water from forming a film across the insulation between the tops of the cylinders. The tape capacity of the recorder is sufficient for recording twelve 10-min periods at a tape speed of 1.5 mm/sec. The electric power from the battery is sufficient for recording sixteen 15-m-long tape reels. Orig. art. has: 2 figures and 1 table. [WA-N04]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 002/

Card 2/2

SHEYKIN, I.V.

Determining ground temperature at the depth of the zero curtain.
Mat. k ucheb. o merz. zon. zem. kory no.9:195-210 '63 (MIRA 18:1)

PORKHAYEV, G.V., kand.tekhn.nauk; FEDOROVICH, D.I.; SHEYKIN, I.V.; DUKHIN, I.ie.; SHUMELUKOV, V.K.; SHUR, Yu.L.; FEL'DMAN, G.M.; FILIPPOVSKIY, S.M.;

[Thermal physics of freezing and thawing soils] Teplofizika promerzaiushchikh i protaivaiushchikh gruntov. Moskva, Nauka, 1964. 195 p. (MIRA 17:8)

1. Moscow. Institut merzlotovedeniya.

SHEYKIN, M.I.

KUMKOV, E.A., starshiy nauchnyy sotrudnik; SHEYKIN, M.I., starshiy nauchnyy sotrudnik.

Practice of spinning flax roving on short staple equipment. Tekst.prom. 17 no.6:59-60 Je '57. (MLRA 10:7)

1. TSentral'nyy nauchno-issledovatel'skiy institut l'nyanogo volokna. (Flax) (Spinning machinery)

SHEYKIN, M.I., kand.tekhn.nauk; BARANOVA, Ye.P.

Spinning flax combines. Tekst.prom. 17 no.12:19-22 D '57. (MIRA 11:1)

(Flax) (Combing machines)

ACC NR: AT6003864 SOURCE CODE: UR/2865/65/004/000/0308/0315

AUTHOR: Bogina, I. D.; Rokotova, N. A.; Rogovenko, Ye. S.; Sheykin, R. L.

ORG: none

TITLE: Effect of partial limitation of motor activities on basic physiological processes in monkeys

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 308-315

TOPIC TAGS: respiration, brain, animal physiology, experiment-animal, space flight simulation, space physiology, weightlessness, physiologic parameter

ABSTRACT: Experiments with partial restraint of monkeys have been performed during the last two years because under weightless conditions partial restraint of humans and animals has become the standard form of existence during spaceflight. In the authors' laboratories, a restraint system designed by Sheykin, which consists of a restraining collar, a belt, and either a seat (for the macaque monkey) or a foot rest (for the capuchin monkeys), was used.

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L 31313-66
ACC NR: AT6003864

The first series of experiments was performed on four monkeys for the purpose of determining the effects of prolonged, partial restraint of motor activity on the circadian rhythm of behavior, on the appetite, and the orienting reflex. The monkeys showed an insignificant diminution in the duration of sleep and a depression of the orienting reflex only during the first two to four days after the beginning of the experiment. Their appetite remained good during the entire period of restraint (10 days to 4 months). Daily medical examinations failed to reveal any pathological results of prolonged restraint. After the monkeys were freed from restraint they experienced a certain difficulty in walking. When sitting on a shelf they tried to assume the pose in which they had been restrained. After prolonged restraint (4 months) there was a certain loss of spatial orientation, which manifested itself in the inability of the monkeys to estimate distances properly when jumping. However, all these consequences of restraint disappeared after 2—3 hours. Tests showed that there was no change in sexual drives as a result of prolonged restraint.

The purpose of the second series of experiments was to study diurnal variations in respiratory rhythm, cardiac activity, and bioelectrical activity of the brain of restrained monkeys. Experiments were performed on two capuchin and one macaque monkey. Special features were added to

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ACC NR: AT6003864

Sheykin's restraint system for recording respiration, motor activity, EKG, and EEG. Data from the experiments indicated that changes in the frequency of respiration, in general, were related to motor activities of the monkeys. Respiration in monkeys fluctuated between 32 and 47 cycles per min. Frequency of respiration tended to diminish during the night hours when the monkeys slept. Data obtained two weeks after the beginning of the experiment did not vary much from results obtained during the first three days. Pulse frequency in the macaque monkey ranged from 120 to 160 cps, and in the capuchin from 200 to 250 cps. External stimulation (a rhythmic flashing light) caused the pulse to rise somewhat; in the macaques, for example, it went up to 200 cps. During the course of the experiment the pulse rate tended to remain steady. Restrained macaque monkeys at rest tended to exhibit an alpha-like rhythm with a frequency of 8-12 cps and an average amplitude of 90-95μv. Light stimulation of the eyes caused a distinct inhibition of this rhythm. Capuchin monkeys show a characteristic data-like rhythm with a frequency of 25-35 cps and an average amplitude of 70μv. The bioelectrical activity of the brain of the monkeys did not show any variations during the period of their restraint. The data obtained in these experiments indicate that under conditions of partial restraint, the respiration, heart beat, and bioelectrical activity of the brain remain within normal limits for the duration of the period of restraint. A comparison of the results of these experiments with those found in the literature

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L 31313-66

ACC NR: AT6003864

indicates that prolonged restraint has certain advantages over comparatively short-term restraint. The relative stability of physiological indices obtained during prolonged restraint indicates that animals in limited-restraint systems could be used as subjects in space-flight experiments. Orig. art. has: 3 figures. [ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 003

Card 4/4

YAKUBENKO, Z.K., mladshiy nauchnyy sotrudnik; BARANOVA, Ye.P., mladshiy nauchnyy sotrudnik; Prinimali uchastiye: SHEYKIN, M.I., kand. tekhn.nauk; GORDON, N.B., kand.tekhn.nauk; TARASOV, S.V., kand.tekhn.nauk

Manufacture of nonwoven packing materials from short No.3 flax fibers with the gluing method. Nauch.-issl.trudy TSNIILV 17: 153-162 '62. (MIRA 16:10)

S/865/62/002/000/042/042
D405/D301

AUTHORS: Rokotova, N.A., Bogina, I.D., Bolotina, O.P., Kucherenko, T.M., Rogovenko, Ye.S. and Sheykin, R.L.

TITLE: Effect of prolonged limitation of motor activity on vital functions in monkeys

SOURCE: Problemy kosmicheskoy biologii. v. 2. Ed. by N. Sisakyan and V. Yazdovskiy. Moscow, Izd-vo AN SSSR, 1962, 417-427

TEXT: The experiments were conducted on four monkeys (of three different types). The first experimental series lasted for 10 days and the second for $3\frac{1}{3}$ months. The experiments were conducted in two different models of fixators: one designed by Lilly and Mason, and the second by R.L. Sheykin. The pulse and respiration rates were determined, as well as the weight of the monkeys prior to, and after the experiments. It was found that prolonged limitation of motor activity has no harmful effect on the physiological functions of the monkeys, their behavior and the state of their ner-

Card 1/2

Effect of prolonged limitation ...

vous system. During the first 2-4 days of restricted motion some (insignificant) changes in sleeping time and a depression in the orienting reflex were observed. These effects did not last long and after 3-5 days already the functions of the animals returned to normal. Monkeys, kept in a fixator, can serve as valuable objects for further investigations. The amount of food consumed by the animals dropped by 26-50%, whereas the composition of the diet remained practically unchanged. The weight of the monkeys increased sharply (by about 50%) during a fixation period of 3½ months. The pulse and respiration rates were not appreciably affected. The hair and skin were in a good state. The apparatus developed by Sheykin proved to be more advantageous than that of Lilly and Mason. There are 5 figures and 4 tables. The most important English-language references read as follows: Lilly J.C.F. Appl. Physiol., 12, 1 1958 and Mason J.W.F. Appl. Physiol. 12, 1, 1958.

Card 2/2

ROKOTOVA, N.A.; BOGINA, I.D.; BOLOTINA, O.P.; KUCHERENKO, T.M.; ROGOVENKO, Ye.S.; SHEYKIN, R.L.

Effect of prolonged limitations of the motor activity on vital activities in monkeys. Probl.kosm.biol. 2:417-427 '62. (MIRA 16:4)

(SPACE MEDICINE)

BOGINA, I.D.; ROKOTOVA, N.A.; ROGOVENKO, Ye.S.; SHEYKIN, R.L.

Effect of partial limitation of motor activity on basic physiological processes in monkeys. Probl. kosm. biol. 4:308-315 '65.
(MIRA 18:9)

SHEYKIN, S.D.

Experience in dispensary treatment of patients with pyorrhea.
Stomatologiia 36 no.4:11-15 Jl-Ag '57. (MIRA 10:11)

1. Iz kafedry terapevticheskoy stomatologii (zav. - prof. Ye.Ye. Platonov) Moskovskogo meditsinskogo stomatologicheskogo instituta (dir. - dotsent G.N.Beletskiy)
(GUMS--DISEASES)

SHEYKIN, V.P.

Gathering and using petroleum (casinghead) gas in the fields of Krasnodar Territory. Gaz. delo no.6/7:86-89 '63. (MIRA 17:10)

1. Ob"yedineniye "Krasnodarneftegaz."

BLOKH, S.A.; MAYEVSKIY, Ye.R.; SHEYKINA, K.A.

Investigating the operation of kilns for firing grog floater bars. Trudy Inst. isp. gaza AN URSR no.5:127-134 '58. (MIRA 11:12)
(Refractory materials) (Kilns)

KISLYAKOV, V.A.; SHEYKINA, R.L.

Method of studying the effect of the vestibular apparatus upon the higher nervous function. Fiziol.zhur. 39 no.4:486-488 Jl-Ag '53. (MLRA 6:8)

1. Laboratoriya interotseptivnykh uslovnykh refleksov Instituta fiziologii imeni I.P.Pavlova Akademii nauk SSSR. (Nervous system)

SHEYKINA, T. A., Cand Biol Sci -- (diss) "Dynamics of conditioned-reflex activity of patients with increased tonus of the skeletal musculature in their treatment with curare-like preparations (elatine, mellictine, and cobanine)." Leningrad, 1960. 14 pp; (Academy of Sciences USSR, Inst of Physiology im I. P. Pavlov); 250 copies; price not given; (KL,18-60, 150)

MAINOVSKIY, O.V.; SHEYKINA, T.A.

First symposium on postradiational reparation of the cell.
TSitologiia 5 no.5:600-601 S-O '62. (MIRA 18:5)

SERYAKOV, N.I.; SHEYKINA, T.S.; PETROV, V.V.; IDBRIL', Z.Ya.; SHESTERIKOV, V.G.; PRONIN, V.M.; LYUBSKIY, G.S.; ISAKOV, I.K.; VOLODARSKAYA, V.Ye., red.

[Automated power supply guarantee systems for telecommunication apparatus] Avtomatizirovannye ustroistva garantirovannogo pitaniia apparatury sviazi; informatsionnyi sbornik. Moskva, Izd-vo "Sviaz'," 1964. 132 p. (MIRA 17:6)

ZARYVAYSKAYA, Kh. [Zaryvais'ka, Kh.], kand.med.nauk; GOYEVSKAYA, V. [Haievs'ka, V.], vrach.; SHEYKINA, Ye., vrach.; VISHNEVA, P., vrach

Results of hygiene tests of hot-air heating systems with natural stimulation. Bud.mat.i konstr. no.5:61-62 S-O '62. (MIRA 15:11)
(Hot-air heating)

SHEYKMAN, M.B. (Moskva).

Clinical picture and therapy of primary aldosteronism.
Klin.med. 36 no.10:46-54 O '58 (MIRA 11:11)

1. Iz kafedry endokrinologii (zav. - zaslyzhennyy deyatel' nauki prof. N.A. Shereshevskiy) Tsentral'nogo instituta usovershenstvovaniya vrachey (dir. prof. V.P. Lebedeva) na baze Bol'nitsy imeni Botkina (glavnyy vrach - prof. A.N. Shabanov).
(ALDOSTERONE,
aldosteronism, primary, clin. picture & ther. (Rus))

SHEYKMAN, M.B.

Changes in blood proteins, lipoproteins, and glucoproteins in patients with diabetes mellitus. Klin.med. 38 no.7:36-44 '60. (MIRA 13:12)

(BLOOD PROTEINS) (DIABETES)

SHEYKMAN, M.B. (Moskva)

Study of proteins, lipoproteins, and glycoproteins of the blood serum in diabetes mellitus. Vrach. delo no.8:129 Ag '60. (MIRA 13:9)

1. Kafedra endokrinologii (zav. - zasl. deyatel' nauki, prof. N.A. Shereshevskiy) TSentral'nogo instituta usovershenstvovaniya vrachey.

(DIABETES) (BLOOD--EXAMINATION)
(PROTEINS) (LIPOPROTEINS) (GLYCOPROTEINS)

SHEYKMAN, M. B.

Cand Med Sci - (diss) "Change in protein fractions, lipo-proteins and glucoproteins of blood serum in patients with sugar diabetes (without and in the presence of aterosclerosis)." Moscow, 1961. 11 pp; (Academy of Medical Sciences USSR); 300 copies; price not given; (KL, 7-61 sup, 263)

SHEYKMAN, M.B. (Moskva)

Changes in the proteins, lipoproteids and glucoproteids of blood serum, and the adrenocortical function in the sulfanilamide treatment of diabetes; abstract. M.B. Sheikman. Kaz. med. zhur. no.1:109 Ja-F'61 (MIRA 16:11)

SHEYKMAN, M.B.

Changes in the amount of hexose bound with serum proteins in diabetes mellitus. Probl. endok. i gorm. 7 no.1:91-96 '61. (MIRA 14:3)

(DIABETES) (HEXOSE)
(BLOOD PROTEINS)

SHEYKMAN, M.B.

Method of staining glycoproteids in electrophoregrams (simplified modification). Lab. delo 7 no.5:21-22 My '61. (MIRA 14:5)

1. Kafedra endokrinologii (zav. - zasluzhennyy deyatel' nauki prof. N.A.Shereshevskiy [deceased]) TSentral'nogo instituta usoverhsenstvovaniya vrachey, Moskva.
(GLYCOPROTEINS) (ELECTROPHORESIS)
(STAINS AND STAINING (MICROSCOPY))

ZAYTSEV, V.F.; MYASNIKOV, A.A.; SHEYKMAN, M.B.

Effect of ascorbic acid on the distribution of 4 C^{14}-labeled cholesterol in tissues in experimental atherosclerosis. Kardiologiia 4 no.6:30-34 N-D '64. (MIRA 18:8)

1. Institut terapii (direktor - prof. A.L.Myasnikov) AMN SSSR, Moskva.

POKROVSKIY, A.A.; SHEYKMAN, M.B.; PLENKINA, R.A.

Study of the activity of lypolytic enzymes in the adipose tissue. Vop. med. khim. 11 no.4:72-76 Jl-Ag '65. (MIRA 18:8)

1. Laboratoriya klinicheskoy enzimologii Instituta pitaniya AMN SSSR, Moskva.

SHEYKMAN, M.B.

Review of the "Journal of atherosclerosis research" for 1961.
Kardiologiia 2 no.5:86-89 S-O '62. (MIRA 15:12)
(ARTERIOSCLEROSIS--PERIODICALS)

VOLOSHCHENKO, M.V.; DZYBAL, L.T.; KLIMENKO, V.M.; SHEYKO, A.A.; MALAFIY, G.V.

Production of cast iron crankshafts with spheroidal graphite for 6Ch 12/14 diesels. Lit. proizv. no.8:41-42 Ag '61. (MIRA 14:7)

(Iron founding) (Cranks and crankshafts)

VOLOSHCHENKO, M.V.; KLIMENKO, V.M.; SHEYKO, A.A.

Making castings of cupola-melted austenitic iron with spheroidal graphite. Nauch. trudy Inst. lit. proizv. AN URSR 11:55-57 '62. (MIRA 15:9)

(Cast iron)

BURDYUG, G.K.; VOLOSHCHENKO, M.V.; KLIMENKO, V.M.; SHEYKO, A.A.

Ultrasonic control of crankshafts made of nodular cast iron.
Nauch. trudy Inst. lit. proizv. AN URSR 11:65-69 '62.
(MIRA 15:9)

(Cast iron--Testing) (Ultrasonic testing)

1. SHEYKO, A. N. Eng.: RAZGON, L. I.: KOVERDIN, N. T.

2. USSR (600)

4. Soap

7. Applying Bogod's method in the "Novyi mylovar" Factory. Masl. Zhir. prom. 17, no. 3, 1952.

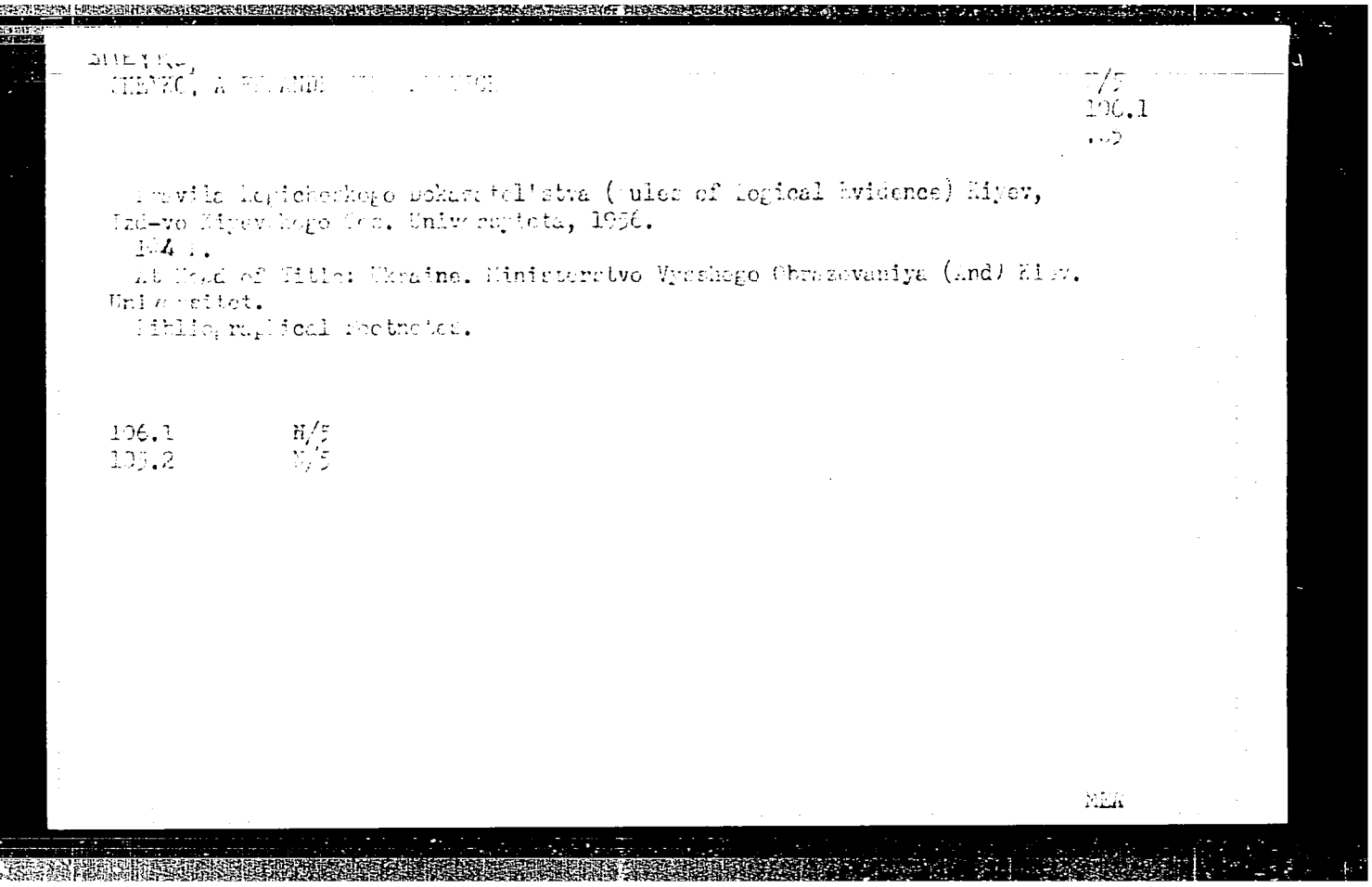
9. Monthly List of Russian Accessions, Library of Congress, February 1953, Uncl.

SHEYKO, A. N.

USSR

Method of boiling 60% household soap without settling. A. N. Sheiko, L. L. Razgon, and N. T. Komardin. *Maslo-bolno-Zhirovaya Prom.* 19, No. 8, 20-2(1954).—In this process stock is boiled with enough soda and soda ash to saponify 60% of fatty, naphthenic, and resin acids. Carbonic sapon. is replaced by that of caustic at the point when fatty acids and calcined soda conens. in the soap are 60–70 and 0.35%, resp., and fatty acidity in "carbonated mass" is 20–5%. Toward the end of the boiling operation the soap should contain free alkali 0.15–0.2, fatty acids 62–3.5, calcined soda 0.15–0.3, and salt 0.3–0.4%.

Vladimir N. Krukovsky



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[illegible], A. [illegible]

H/5
106.1
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...ravila logicheskogo dokazatel'stva (ules of Logical Evidence) Kiyev, Izd-vo Kiyevskogo Gos. Universiteta, 1956.
144 p.
At head of title: Ukraine. Ministerstvo Vysshego Obrazovaniya (and) Kiev. Universitet.
Bibliographical footnotes.

106.1 H/5
106.2 M/5

MBA

SHEYKO, A.N.; P'YASKOVSKIY, B.V. [P'iaskovs'kyi, B.V.]

"Dialectics as logic" by P.V.Kopnin. Reviewed by A.N.Sheiko.
Dop. AN URSR no.2:273-275 '62. (MIRA 15:2)
(Dialectical materialism)

MUSHKALO, L.K.; SHEYKO, D.I.

Condensation of o-aminoselenophenol with unsaturated carboxylic acids. Ukr. khim. zhur. 30 no.4:384-387 '64.
(MIRA 17:6)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.

SHEYKO, A. P.

Sheep

Application of milk douches in spasms of the cervix uteri during parturition
Veterinariia, 29, no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

SHEYKO, B. G.

23376 Pryazha Iz Shtapel'nogo Steklovolokna. Legkaya Prom-st', 1949, No. 6, c.21-23

SO: LETOPIS NO. 31, 1949

SHEYKO, D.F., shtanpovshchik.

Automatic feeding blanks. Prom. koop. no.5:[illegible]-9 My '58. (MIRA 11:4)

1. Artel' "Metallist," Khar'kov.
(Power presses--Safety appliances)

MUSHKALO, L.K.; SHEYKO, D.I.; LANOVAYA, Ye.I.

Condensat' n of o-aminoselenophenol with unsaturated ketones. Report No 2. Ukr.khim.zhur. 30 no.5:502-503 '64. (MIRA 18:4)

1. Kiyevskiy gosudarstvennyy universitet.

ZHIKHAREVICH, A.S.; KARAULOV, A.G.; PANICH, B.I.; SHEYKO, I.I.; POLYAKOV, V.F.; KHALEMSKIY, S.F.

Replacement of cast steel plugs used in the top pouring of steel by ceramic graphite-bearing inserts. Metallurg 6 no.11:18-19 N '61. (MIRA 14:11)

(Steel ingots)

ANTONOV, G. I., inzh.; SHEYKO, I. I., inzh.; KHALEMSKIY, S. F., inzh.; KAL'NOY, Ye. L., inzh.

Using 50 mm. facing bricks in open-hearth furnaces in foundries. Mashinostroenie no.5:42-43 S-O '62. (MIRA 16:1)

1. Ukrainskiy institut ogneuporov i Zavod im. Malysheva.

(Open hearth furnaces—Equipment and supplies)

L 00891-67 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JW/JG

ACC NR: AP6021617 SOURCE CODE: UR/0021/66/000/006/0782/0784

AUTHOR: Sheyko, I. M. — Sheyko, I. N.; Bukhalova, H. O. — Bukhalova, G. A.; Mal'tsev, V. T.

32
B

ORG: Institute of General and Inorganic Chemistry, AN URSR (Instytut zahal'noyi ta neorhanichnoyi khimiyi AN URSR)

TITLE: The $KF-HfF_4$ binary system

SOURCE: AN UkrRSR. Dopovidi, no. 6, 1966, 782-784

TOPIC TAGS: hafnium compound, fluoride, thermographic analysis, phase composition

ABSTRACT: The authors study the $KF-HfF_4$ system at 400-1000°C with a hafnium fluoride concentration of up to 55 mol.% by the visual-polythermal method and up to 35 mol.% by the thermographic method on M. S. Kurnakov's pyrometer. Heat effects which interfere with the study are encountered when hafnium fluoride concentration exceeds 55%. The visual-polythermal, thermographic and x-ray phase methods show that two congruently melting compounds, K_3HfF_7 and $KHfF_5$, and one incongruently melting compound, K_2HfF_6, are formed during crystallization from liquidus in this binary system where HfF_4 concentration is less than 50 mol.%, while the compound K_4HfF_8 is formed in the solid phase. The article was presented for publication by Academician Yu. K. Delimars'kyy. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 19Jun65/ ORIG REF: 004

Card 1/1 afs

L 45770-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6026299 SOURCE CODE: UR/0021/66/000/007/0917/0919

38
B

AUTHOR: Sheyko, I, M. -- Sheyko, I. N.; Bukhalova, H. O. -- Bukhalova, G. A.; Mal'tsev, V. T.

ORG: Institute of General and Inorganic Chemistry, AN URSR (Instytut Zahal'noyi ta neorhanichnoyi khimiyi AN URSR)

TITLE: NaF-KF-HfF_4 ternary system

SOURCE: AN UkrRSR. Dopovidi, no. 7, 1966, 917-919

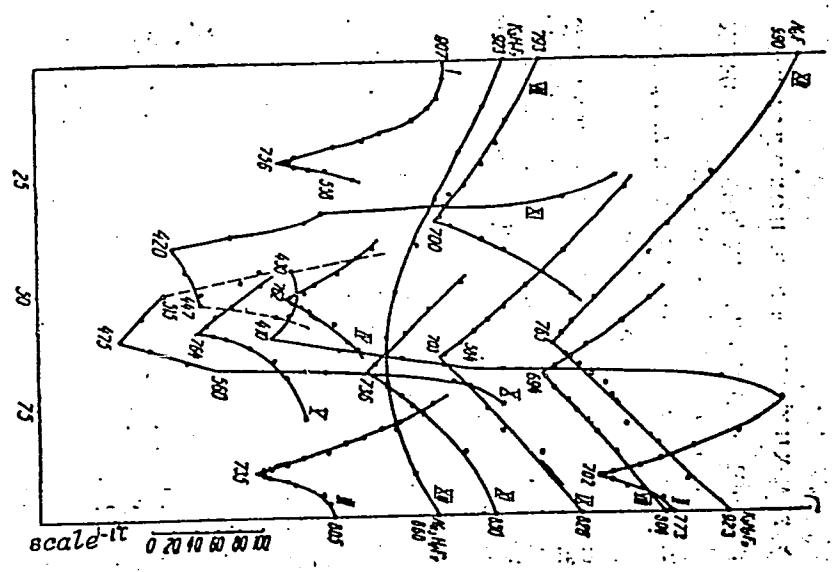
TOPIC TAGS: hafnium compound, sodium compound, potassium compound, fluoride, thermographic analysis, crystallization, eutectic mixture, solid solution, ternary alloy, phase diagram

ABSTRACT: The paper is a continuation of the authors' study on the interaction of hafnium fluoride with potassium and sodium fluorides in solution to obtain data for the electrometallurgy of hafnium. The method used for studying, preparation of alloys and apparatus used in this study is described in previous works by the authors. Both the visual polythermic and thermographic methods were used for studying melting in the NaF-KF-HfF_4 system. Thirteen internal sections were studied (see figure 1). A figure is given for the projection of the liquidus surface on the phase diagram for

Card 1/3

L 45770-66

ACC NR: AP6026299



Card 2/3

L 45770-66
ACC NR: AP6026299 6

the NaF-KF-HfF_4 ternary system. It is shown that surface crystallization is divided into 6 fields by monovariant curves: field 1 I - HfF_4, II - $NaHfF_5$-$KHfF_5$ solid solution; III - Na_2HfF_6-K_2HfF_6 solid solution; IV - Na_3HfF_7-K_3HfF_7 solid solution; V - NaF; VI - KF. It is shown that the system has one ternary eutectic point with the composition: 27 mol.% NaF, 65% Kf, 8% HfF_4 with a melting point of 680°C. Visual polythermic and thermographic methods show that the compounds Na_3HfF_7, K_3HfF_7, Na_2HfF_6, K_2HfF_6, $KNaHfF_5$ and $KHfF_5$ form a continuous series of solid solutions, thus showing their isomorphism. The article was presented for publication by Academician AN URSR Yu. K. Delimars'kyy. Orig. art. has: 2 figures.

SUB CODE: 07, 20/ SUBM DATE: 19Jun65/ ORIG REF: 006

Card 3/3

USSR/Chemistry - Electrolytic Deposition Apr 51

"Determination of Individual Electrode Potentials in Fused Aluminum Chloride-Sodium Chloride as Solvent," Yu. K. Delimarskiy, L. S. Berenblyum, I. N. Sheyko, Inst Gen and Inorg Chem, Acad Sci Ukrainian SSR, Kiev

"Zhur Fiz Khim" Vol XXV, No 4, pp 398-403

Exaind decompn potentials, Polarization emf, sep cathode and anode potentials in respect to Pt ref electrode of chlorides of Ni, Co, Ti, Mn, Zn, Cd, Sn, Pb, Cu, Ag, Sb, Bi in fused $AlCl_3$-NaCl electrolyte at 300-500°C. Noted 2 electrode potentials for Cd, Sn; linked 2d to cathodic process. Discusses different effect of temp on Ni, Co from that on other metals.

180T21

SHEYKO, I. N.

Electrical conductivity in the beryllium chloride–sodium chloride system. Yu. K. Delimarskii, I. N. Sheiko, and V. G. Feshchenko. Inst. Gen. and Inorg. Chem., Acad. Sci. Ukr. S.S.R., Kiev. *Zhur. Fiz. Khim.* 29, 1499–1507 (1955).—The elec. cond. of pure $BeCl_2$ and NaCl was detd. between 445° and 488°. The data were used to calc. the activation energy of $BeCl_2$ and the electrolyte dissocn. of fused $BeCl_2$. The elec. cond. of $BeCl_2$–NaCl with 30–78.5 mol. % $BeCl_2$ was detd. between 250 and 500°. The isotherms and the polytherms of the specific cond. in the $BeCl_2$–NaCl system were constructed from the exptl. data; also the temp. coeff.-compn. curves. Two max. and two min. were found on the elec. cond. isotherms and on the temp. coeff.-compn. curve. The log κ and $1/T$ are in almost linear relation in the system. The largest deviations from the linear relation is found in compns. close to the eutectic. The elec. cond. data indicate the existence of the Na_2BeCl_4 compd., and of the eutectics formed with it.

W. M. Sternberg

LFH

SHEYKO, I.N.; DELIMARSKIY, Yu.K.

Investigating the decomposition potentials of the system $BeCl_2$ — NaCl with regard to the correlation of components in the fusion. Ukr.khim.zhur. 23 no.6:713-720 '57. (MIRA 11:1)

1.Institut obshchey i neorganicheskoy khimii AN USSR.
(Beryllium chloride) (Salt)

S/073/60/026/003/011/011/XX
B023/B060

AUTHORS: Sheyko, I. N. and Feshchenko, V. G.

TITLE: On the Occasion of N. S. Kavetskiy's Review of the Article "Study of the Decomposition Voltage of the K_2ZrF_6 - NaCl - KCl System"

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 3, pp. 394-395

TEXT: N. S. Kavetskiy states without producing any experimental or theoretical proof that the diaphragm provided with an opening, used by the authors in their investigation (Ref. 1), functions as a bipolar electrode. He bases on this unjustified statement to declare that the method applied by the authors is wrong. It is a known fact, so the authors go on, that a plate or a net or a substance exhibiting electrical conductivity, may function also as a diaphragm, and not only as a bipolar electrode. This depends on the construction of the electrolytic cell and on its working conditions. This ability has been widely exploited in numerous electrolytic cells of industrial and laboratory types (Refs. 4-6). Graphite diaphragms with an opening of 1-2 mm in diameter have been applied

the value 1.25 v (which fits the data from literature per Ref. 12) contradicts Kavetskiy's statement concerning the additional polarization, said to have taken place in the investigation (Ref. 1). Consequently, all his objections concerning the interpretation of the J-V curves are annulled. Kavetskiy's remark stating the impossibility of studying the electrode polarization in the precipitation of zirconium with the aid of a zirconium reference electrode is based on a misunderstanding. This generally applied method of investigating the electrode polarization and the difference among the potentials between two equal electrodes is explained by concentration polarization and the partial irreversibility of the electrode processes. A paper by V. S. Lyashchenko (Ref. 15) is mentioned. There are 1 table and 15 references: 12 Soviet, 2 US, and 1 Italian.

SHEYKO, I.N.; GORODYSKIY, A.V.; BYKOVA, M.I.

Polarographic observation of fused potassium fluozirconate. Zhur. neorg.khim. 6 no.10:2341-2343 O '61. (MIRA 14:9)
(Potassium fluozirconate) (Polarography)

26279
S/073/61/027/004/003/004
B127/B203

S 2200

AUTHORS: Sheyko, I. N., Chernov, R. V., and Kikhno, V. S.

TITLE: Melting diagrams of some salt systems containing potassium fluozirconate. Communication I

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 27, no. 4, 1961, 469-473

TEXT: For obtaining metallic zirconium, the electrolysis of salt melts is used; the metling diagrams of these salts were studied by the authors. Primarily, KF-K_2ZrF_6; KCl-K_2ZrF_6; KCl-K_3ZrF_7; NaCl-K_2ZrF_6; KCl-NaCl-K_3ZrF_7. The studies were conducted by the visual-polythermic method. Arrangement: A platinum pot placed in quartz was arranged in an electric furnace with a Pt-Pt-Rh thermocouple in argon atmosphere; results are given in Figs. 1 - 5. All systems melt congruently; the systems KCl-K_3ZrF_7 and KCl-NaCl-K_3ZrF_7 show a simple eutectic; K_2ZrF_6, however, melts incongruently, and the salt K_3ZrF_7 first crystallizes out of its melt. There are 5 figures and 6 references: 4 Soviet and 2 non-Soviet.

Card 1/7

The two references to English-language publications read as follows: Ref. 3: M. Steinberg, M. Sibert, E. Wainer, J. Electrochem. Soc., 101, 63 (1954); 103, 137 (1955); Ref. 5: C. I. Barton, W. R. Crimes, H. Insley, R. E. Moore, R. E. Throma, J. physic. chem., 62, 665 (1958).

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR
(Institute of General and Inorganic Chemistry AS UkrSSR)

SUBMITTED: April 29, 1960

Fig. 1. System $KF-K_2ZrF_6$

Fig. 2. System $KCl-K_2ZrF_6$

Fig. 3. System $KCl-K_3ZrF_7$

Fig. 4. System $NaCl-K_2ZrF_6$

Fig. 5. System $KCl-NaCl-K_3ZrF_7$

SHEYKO, I.N.; FESHCHENKO, V.G. [Feshchenko, V.H.]

Determination of the decomposition potentials of fused salts in graphite cells. Ukr. khim. zhur. 27 no.4:473-478 '61. (MIRA 14:7)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Salts) (Electromotive force)

30871
S/073/61/027/006/003/005
B110/B147

5.4700

AUTHORS: Sheyko, I. N., Gorodyskiy, A. V., Kuz'movich, V. V.

TITLE: Polarography of molten systems containing zirconium compounds

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 27, no. 6, 1961, 767 - 770

TEXT: Molten Zr compounds were studied polarographically to obtain some data on the electrolytic deposition of Zr from melts. An automatic polarograph with solid stationary electrodes with depolarization of the electrodes between the exposures by short-circuiting was used. A 5 m long and 0.5 mm thick Pt wire served as cathode while a 2500 mm^2 Pt disk was taken as anode. The melt was in a porcelain crucible in a quartz test tube in an Ar atmosphere. Molten systems of K_2ZrF_6, $ZrCl_4$, and ZrO_2 were investigated, molten equimolar mixture of KCl and NaCl being used as a background. Two waves were found in the polarogram of K_2ZrF_6 with 2-5 mole% concentration, which indicate the presence of transformation products of electrolytic dissociation of K_2ZrF_6: $xK^+ + (F^-)_x \cdot ZrF_4 \rightleftarrows (KF)_x \cdot ZrF_4$

Card 1/3

30871
S/073/61/027/006/003/005
B110/B147

Polarography of molten systems...

$\rightleftarrows (KF)_x \cdot ZrF_y^{(4-y)+} + (4-y)F^-$, where (y = 0 + 4). Small amounts of a transformed form (TF) of K_2ZrF_6 cause the occurrence of waves in the polarograms of pure K_2ZrF_6 and react on the electrode at lower voltages. Discharge of TF can only be effected by low current densities. An additional increase of voltage causes separation of alkali metal or Zr or reduction of the original form (OF) of K_2ZrF_6 to Zr metal. It was possible to observe OF waves on a background of alkali metal when polarographing dilute K_2ZrF_6 melts (0.1%). Presumably, the maxima of the two waves of the OF polarograms are caused by variation of the active electrode surface. Since both OF waves have the same height, reduction to Zr metal probably takes place according to "4-2-0" (two successive processes) or according to "4-2, 4-0" (two parallel processes). For the systems $KCl \cdot NaCl - ZrCl_4$, $KCl \cdot NaCl - ZrO_2$, $KCl \cdot NaCl \cdot NaF - ZrO_2$ the electrodic processes were only estimated approximately. As $ZrCl_4$ possesses a considerable vapor tension at melting temperature, its 30% solution was used

Card 2/3

SHEKA, I.A., otv. red.; DELIMARSKIY, Yu.K., red.; KOZACHEK, N.N., red.; NATANSON, E.M., red.; SHEYKO, I.N., red.; MATVIYCHUK, A.A., tekhn. red.

[Applications of zirconium and its compounds in industry; materials] Primenenie tsirkoniia i ego soedinenii v promyshlennosti; materialy. Kiev, Izd-vo Akad. nauk USSR, 1962. 97 p. (MIRA 15:7)

1. Soveshchaniye pri gosplane GNTK i Akademii nauk USSR, Kiev, 1960. (Zirconium—Industrial applications)

SHEKA, I.A., otv. red.; DELIMARSKIY, Yu.K., red.; KOZACHEK, N.N., red.; NATANSON, E.M., red.; SHEYKO, I.N., red.; MATVIYCHUK, A.A., tekhn. red.

[Materials of the Technological Conference on the Use of Zirconium and its Compounds in Industry] Materialy Nauchno-tekhnicheskogo soveshchaniia po primeneniiu tsirkoniia i ego soedinenii v promyshlennosti, Kiev, 1960. Kiev, Izd-vo Akad. nauk USSR, 1962. 97 p. (MIRA 15:4)

1. Nauchno-tekhnicheskoye soveshchaniye po primeneniyu tsirkoniya i yego soyedineniy v promyshlennosti, Kiev, 1960.
(Zirconium--Congresses)

43054

S/826/62/000/000/004/007
D408/D307

5.4700

AUTHORS: Sheyko, I.N., Chernov, R.V. and Kikhno, V.S.

TITLE: Phase diagram of the chloride-fluoride system of sodium, potassium, and zirconium

SOURCE: Fizicheskaya khimiya rasplavlennykh soley i shlakov; trudy Vses. soveshch. po fiz. khimii raspl. soley i shlakov, 22 - 25 noyabrya 1960 g. Moscow, Metallurgizdat, 1962, 72 - 76

TEXT: The authors investigated the behavior of molten K_2ZrF_6 on cooling and the phase diagrams of the systems K_2ZrF_6--KCl, K_2ZrF_6--NaCl, K_2ZrF_6--KF, K_3ZrF_7--KCl, K_3ZrF_7--NaCl, and K_3ZrF_7--KCl--NaCl by the cooling curve method, in order to make good deficiencies in the literature concerning potential electrolytic production of Zr. K_3ZrF_7 was prepared by fusing together the appropriate amounts of KF and K_2ZrF_6 melted incongruently and, when the melt was cooled, K_3ZrF_7 was the first compound to crystal-

Card 1/3

Phase diagram ...

lize out, at 757°C. A thermal effect observed at 591°C probably corresponded to the formation of the compound $ZrF_4.mKF$, where $m < 3$. The phase diagram of the K_2ZrF_6--KF system showed the formation of K_3ZrF_7, melting at 921°C, and a eutectic containing 17 mol.% K_2ZrF_6, which melted at 766°C. The systems K_3ZrF_7--KCl, equimolar KCl - NaCl mixture--K_3ZrF_7, and K_3ZrF_7--NaCl were also found to be relatively simple, having single eutectics containing 23, 21 and 20 mol.% K_3ZrF_7 and melting at 660, 630 and 555°C respectively; a solid solution of NaCl in K_3ZrF_7 was also observed in the K_3ZrF_7--NaCl system. The K_2ZrF_6--KCl system was characterized by the presence of the compound K_3ZrF_6Cl, congruently melting at 730°C, and two eutectics containing 23 and 95 mol.% K_2ZrF_6 melting at 678 and 562°C respectively. The K_2ZrF_6--NaCl system was the most complex of systems investigated, and interpretation of the obtained results is difficult: The liquids curve consists of three branches, the NaCl and K_3ZrF_6Cl branches intersecting at 550°C and 28 mol.% K_2ZrF_6, and K_3ZrF_6Cl and K_3ZrF_7 branches intersecting at 630°C and 79 mol.% K_2ZrF_6. The existence of the K_3ZrF_6Cl was deduced from experiments

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carried out by the method of temperature depression, whereby the addition of KCl to the melt containing 60 - 65 mol.% K_2ZrF_6 increased the temperature of initial crystallization , and with further addition of KCl the rate of temperature rise slowed down, or the temperature even partially decreased; addition of Na_2ZrF_6 decreased the temperature of initial crystallization. There are 6 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry AS UkRSSR)

S/073/62/028/004/003/004
I017/I217

AUTHORS: I.N. Sheyko, and V.G. Fechtenko

TITLE: Study on the partial elasticity of Berilium chloride vapors in mixtures with sodium and potassium chlorides

PERIODICAL: Ukrainskii khimicheskii zhurnal, v.28, no.4, 1962, 473-483

TEXT: The elasticity of the $BeCl_2$ vapors and the partial elasticity of the systems $BeCl_2$-NaCl and $BeCl_2$-KCl are studied. It was found that a linear dependence exists between lg.p and 1/T. The partial elasticity of $BeCl_2$ for the system NaCl-$BeCl_2$ is higher than that obtained for the system KCl-$BeCl_2$. This is explained by the higher stability of the complex compound K_2BeCl_4 in comparison to Na_2BeCl_4. The calculated activities and activity coefficient at 400°C for the systems NaCl-$BeCl_2$ and KCl-$BeCl_2$, show that the activity of $BeCl_2$ in the system NaCl-$BeCl_2$ is higher than its activity in the system KCl-$BeCl_2$.

Card 1/2

S/073/62/028/004/003/004
I017/I217

Study on the partial elasticity...

ASSOCIATION: Institut obchtey y neorganicheskoy khimii AN USSR (Institute for General and Inorganic Chemistry AS Ukr SSR)

SUBMITTED: June 16, 1961

Card 2/2

SHEYKO, I.N.; FESHCHENKO, V.G.

Partial pressure of beryllium chloride vapors in a mixture with sodium and potassium chlorides. Ukr.khim. zhur. 28 no.4:478-483 '62. (MIRA 15:8)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Beryllium chloride) (Vapor pressure)

SHEYKO, I.N.

Electrolytic separation of powdered zirconium from fused salts. (MIRA 16:5)
Ukr.khim.zhur. 29 no.1:57-63 '63.

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Zirconium--Electrometallurgy) (Fused salts)

SHEYKO, I.N.; KIKHNO, V.S.; MEL'NIKOV, V.I.

Melting diagram of the ternary system NaF - KF - ZrF_4. Ukr.khim. zhur. 29 no.12:1259-1264 '63. (MIRA 17:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

ACCESSION NR: AP4040756 S/0073/64/030/006/0577/0581

AUTHOR: Sheyko, I. N.; Barchuk, V. T.

TITLE: Zirconium dichloride behavior in molten mixtures of alkali- and alkali earth chlorides

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 6, 1964, 577-581

TOPIC TAGS: zirconium dichloride, zirconium tetrachloride, zirconium dichloride disproportioning, alkali chloride, alkali earth chloride

ABSTRACT: The object of the study was to find the behavior of zirconium dichloride in the following melts: KCl-LiCl, KCl-NaCl, NaCL-$CaCl_2$, KCl-$MgCl_2$, NaCl-$MgCl_2$, NaCl-$BaCl_2$, NaCl-$AlCl_3$, KCl-NaCl-$ZrCl_4$. It was found that up to 400C $ZrCl_2$ remains unchanged and insoluble. It is present in the melt in the form of a fine suspension. Above 400C, depending on the composition of the melt, it dissociates into $ZrCl_4$ and Zr metal which remains in suspension together with the unreacted $ZrCl_2$ at its surface (in a state of equilibrium) while $ZrCl_4$ dissolves in the melt. This process depends on the nature of the melt, on temperature, and on the duration of the experiment. The quantity of $ZrCl_2$ suspended in the melt depends

Card 1/2

ACCESSION NR: AP4040756

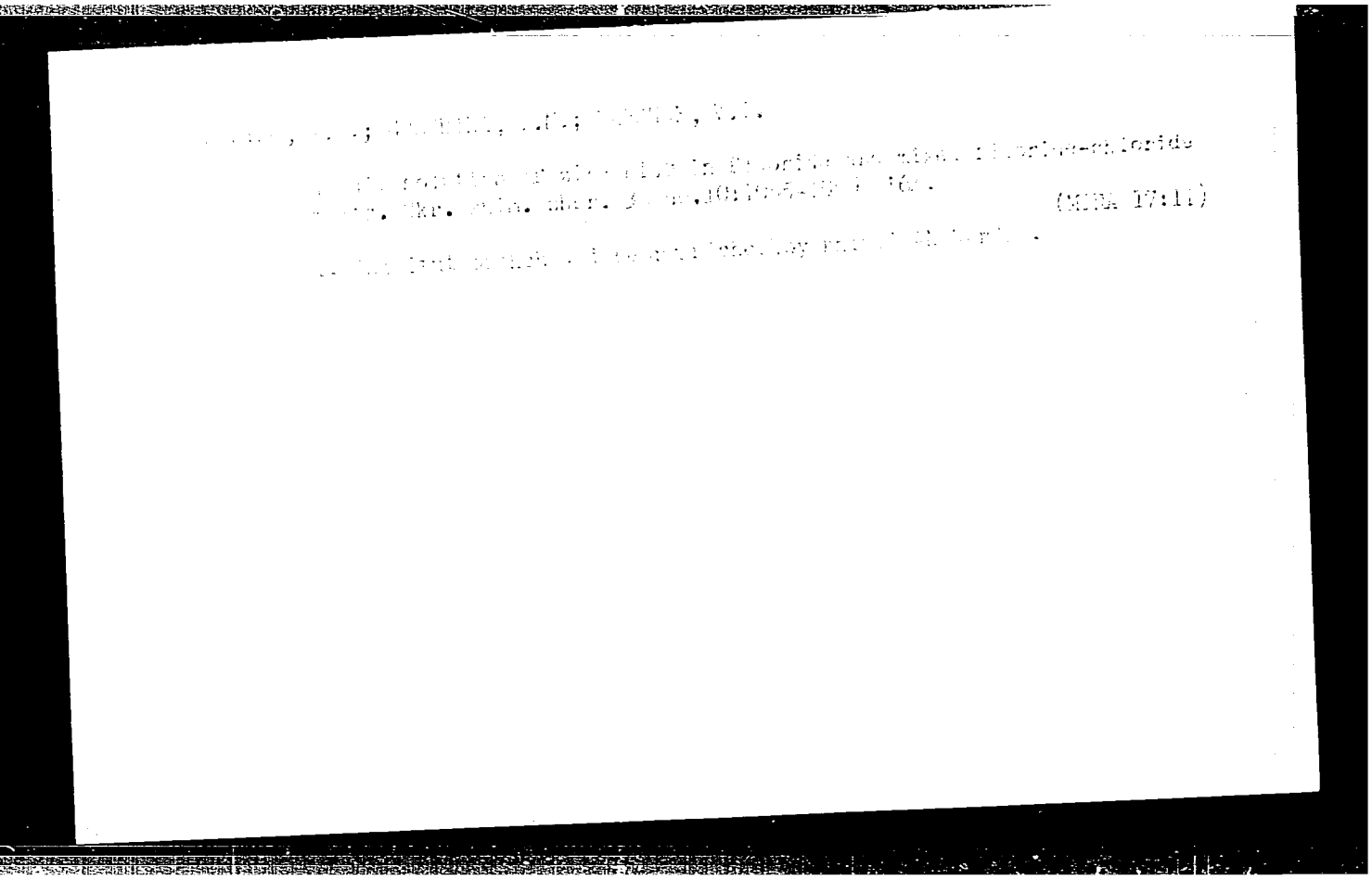
on the temperature and the stability of the Zr metal suspension. All melting tests were made in an argon atmosphere, since Zr powder spontaneously ignites in the air. The conversion of $ZrCl_2$ into $ZrCl_4$ is practically completed in the first 30 min. Orig. art. has: 3 figures, 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of General and Inorganic Chemistry AN UkrSSR)

SUBMITTED: 28Dec62 ENCL: 00

SUB CODE: IC NR REF SOV: 002 OTHER: 000

Card 2/2



SHEYKO, I.N.; MEL'NIKOV, V.I.; SUPRUNCHUK, V.I.

Melting diagram of the system NaCl - KCl - K_2ZrF_6 - Na_2ZrF_6.
Ukr. khim. zhur. 30 no.7:688-69[illegible] '64 (MIRA 18:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

L 63642-65 EWT(m)/EWP(b)/EWP(t) IJP(c) JD
ACCESSION NR: AP5017982 UR/0073/65/031/007/0710/0713
543.7+620.193.43

17
16
B

AUTHOR: Sheyko, I. N.; Bukhalova, G. A.; Mal'tsev, V. T.

TITLE: Fusibility diagram of a reciprocal system of sodium and potassium fluorides and fluohafnates 27

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 7, 1965, 710-713

TOPIC TAGS: sodium fluohafnate, potassium fluohafnate, sodium fluoride, potassium fluoride, fusibility diagram, fused salt system

ABSTRACT: The system $Na, K \parallel F, HfF_7$ was studied by a visual polythermal method in dry carbon dioxide. The following eutectics were found: in Na_3F_3 - Na_3HfF_7 at 762C and 22% Na_3F_3, and in K_3F_3 - K_3HfF_7 at 766C and 55.5% K_3F_3. In Na_3HfF_7 - K_3HfF_7, a continuous series of solid solutions with a minimum at 815C and 35% K_3HfF_7 was observed. The crystallization surface of the system $Na^+, K^+ \parallel F^-$, HfF_7^{3-} was found to consist of three fields of crystallization, those of sodium fluoride, potassium fluoride, and continuous solid solutions of sodium and potassium heptafluohafnates. The system is reciprocal and irreversible. The Na_3F_3 - K_3HfF_7 diagonal section is in the nature of a binary system and divides the com-

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ACCESSION NR: AP5017982

position square into two phase triangles. The K_3F_3 - Na_3F_3 - K_3HfF_7 phase triangle has a eutectic point at 680C with the composition 32% Na_3F_3, 25% K_3HfF_7, 43% K_3F_3. In the Na_3F_3 - K_3HfF_7 - Na_3HfF_7 phase triangle, the curve of cocrystallization of sodium fluoride and solid solutions of sodium and potassium heptafluohafnates has a slight minimum at 756C and the composition 20% Na_3F_3, 20% K_3HfF_7, 60% Na_3HfF_7. The system Na^+, K^+ // F^-, HfF_7^{3-} is the first representative of fused salt systems involving alkali metal fluohafnates. Orig. art. has: 3 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of General and Inorganic Chemistry, AN UkrSSR)

SUBMITTED: 05Feb65 ENCL: 00 SUB CODE: IC, GC

NO REF SOV: 002 OTHER: 000

Card 2/2

SHEYKO, I.N.; SUPRUNCHUK, V.I.; BANNUR, T.A.

Fusibility diagram of the ternary system NaF - NaCl - Na_2ZrF_6.
Ukr. khim. zhur. 31 no.9:927-930 '65. (MIRA 18:11)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

SHEYKO, I.N.; DERKS, O.F.; POZDNYAKOV, A.N.

Density and molar volume of the ternary system. Ukr. khim. zhur. 31 no.10:1055-1060 '65. (MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR. Submitted September 25, 1964.

SHEYKO, I.N.; CHERNOV, R.V.; SUPRUNCHUK, V.I.

Fusibility diagram of the ternary system KF - KCL - K_2ZrF_6.
Ukr. khim. zhur. 31 no. 11:1143-1147 '65 (MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

ACC NR: AT6028813

circuit diagram of the recorder system is given. When a wave actuates the triggering contact, the recorder switches on for 10 min and then shuts off for 2 hr. If, after 2 hr, no waves of the necessary height are detected, the recorder switches on for 5 sec and makes a special mark on the photosensitive oscillograph tape. The unit is powered by a 29-GRMTs-13, 14.5-v, dry-cell battery. The recorder housing is made of opaque, 6-mm-thick textolite plate. The wave staff used in the tests was a poly(vinyl chloride) tube with 2-cm-wide copper rings spaced 10-cm apart. In the tests, it was found that water film on the staff in the wave trough resulted in a thick trace on the tape. To overcome this, the use of an improved type of contact is recommended. The improved contact consists basically of 2 vertically positioned brass cylinders, one within the other and insulated from each other at the top. Two sets of holes at different heights in the outer cylinder allow water to enter (through the lower holes) the space between the cylinders and thus close the circuit. Most of the air in the cavity between the cylinders is forced out of the upper holes; however, some air is trapped above the upper holes thus preventing water from forming a film across the insulation between the tops of the cylinders. The tape capacity of the recorder is sufficient for recording twelve 10-min periods at a tape speed of 1.5 mm/sec. The electric power from the battery is sufficient for recording sixteen 15-m-long tape reels. Orig. art. has: 2 figures and 1 table. [WA-N04]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 002/

Card 2/2

SHEYKIN, I.V.

Determining ground temperature at the depth of the zero curtain. Mat. k uch. o merz. zon. zem. kory no.9:195-210 '63 (MIRA 18:1)

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(MIRA 11:1)

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AUTHOR: Bogina, I. D.; Rokotova, N. A.; Rogovenko, Ye. S.; Sheykin, R. L.

ORG: none

TITLE: Effect of partial limitation of motor activities on basic physiological processes in monkeys

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ABSTRACT: Experiments with partial restraint of monkeys have been performed during the last two years because under weightless conditions partial restraint of humans and animals has become the standard form of existence during spaceflight. In the authors' laboratories, a restraint system designed by Sheykin, which consists of a restraining collar, a belt, and either a seat (for the macaque monkey) or a foot rest (for the capuchin monkeys), was used.

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The first series of experiments was performed on four monkeys for the purpose of determining the effects of prolonged, partial restraint of motor activity on the circadian rhythm of behavior, on the appetite, and the orienting reflex. The monkeys showed an insignificant diminution in the duration of sleep and a depression of the orienting reflex only during the first two to four days after the beginning of the experiment. Their appetite remained good during the entire period of restraint (10 days to 4 months). Daily medical examinations failed to reveal any pathological results of prolonged restraint. After the monkeys were freed from restraint they experienced a certain difficulty in walking. When sitting on a shelf they tried to assume the pose in which they had been restrained. After prolonged restraint (4 months) there was a certain loss of spatial orientation, which manifested itself in the inability of the monkeys to estimate distances properly when jumping. However, all these consequences of restraint disappeared after 2—3 hours. Tests showed that there was no change in sexual drives as a result of prolonged restraint.

The purpose of the second series of experiments was to study diurnal variations in respiratory rhythm, cardiac activity, and bioelectrical activity of the brain of restrained monkeys. Experiments were performed on two capuchin and one macaque monkey. Special features were added to

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Sheykin's restraint system for recording respiration, motor activity, EKG, and EEG. Data from the experiments indicated that changes in the frequency of respiration, in general, were related to motor activities of the monkeys. Respiration in monkeys fluctuated between 32 and 47 cycles per min. Frequency of respiration tended to diminish during the night hours when the monkeys slept. Data obtained two weeks after the beginning of the experiment did not vary much from results obtained during the first three days. Pulse frequency in the macaque monkey ranged from 120 to 160 cps, and in the capuchin from 200 to 250 cps. External stimulation (a rhythmic flashing light) caused the pulse to rise somewhat; in the macaques, for example, it went up to 200 cps. During the course of the experiment the pulse rate tended to remain steady. Restrained macaque monkeys at rest tended to exhibit an alpha-like rhythm with a frequency of 8-12 cps and an average amplitude of 90-95 μv. Light stimulation of the eyes caused a distinct inhibition of this rhythm. Capuchin monkeys show a characteristic data-like rhythm with a frequency of 25-35 cps and an average amplitude of 70 μv. The bioelectrical activity of the brain of the monkeys did not show any variations during the period of their restraint. The data obtained in these experiments indicate that under conditions of partial restraint, the respiration, heart beat, and bioelectrical activity of the brain remain within normal limits for the duration of the period of restraint. A comparison of the results of these experiments with those found in the literature

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indicates that prolonged restraint has certain advantages over comparatively short-term restraint. The relative stability of physiological indices obtained during prolonged restraint indicates that animals in limited-restraint systems could be used as subjects in space-flight experiments. Orig. art. has: 3 figures. [ATD PRESS: 4091-F]

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